

IN THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please **AMEND** claims in accordance with the following:

Please **ADD** new claims 27-30 according to the following:

1. (PREVIOUSLY PRESENTED) A data management method comprising:
 - extracting a portion of a digital content file to be distributed to prepare a preview sample as an index to the digital content file for representing the digital content file;
 - preparing a substantive file by encrypting the digital content file with a content key;
 - preparing user specific authorization information by encrypting the content key based upon user information;
 - preparing a user specific authorization information embedded preview sample by embedding the user specific authorization information, containing information for accessing the encrypted digital content file, as invisible information in the extracted preview sample;
 - synthesizing the substantive file and the user-specific-authorization-information-embedded preview sample to prepare a synthesized digital content file; and
 - distributing the synthesized digital content file.
2. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, further comprising:
 - enabling access to the synthesized digital content file by separating the user-specific authorization information from the preview sample; and
 - restoring from the user-specific authorization information a decryption key as the content key for decrypting the substantive file.

3. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein the preview sample is image data contained in the digital content file and at least one process among image processing, resizing, compressing and a γ -compensation is executed on the image data.

4. (CANCELLED)

5. (CURRENTLY AMENDED) The data management method set forth in ~~claim 4~~ claim 1, wherein the synthesized digital content file contains a plurality of substantive data files based on a plurality of digital content files, and contains a plurality of preview samples corresponding to the plurality of substantive data files; and wherein each preview sample is linked with respective corresponding ones of the plurality of substantive data files.

6. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein the preview sample is data structuralized in one of JPEG and MPEG formats, and the synthesized digital content file is prepared by add-on synthesizing the substantive file to the preview sample using the format of the preview sample.

7. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein in the preparing of the user-specific authorization information, the user information used in the encrypting of the content key is at least one of user identification information, equipment identification information loaded in user-employed computers, CPU identification information loaded in the user-employed computers, and identification information unique to digital-content-storing recording media.

8. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein in the preparing of the user-specific authorization information, the user information used in the encrypting of the content key is identification information common to a plurality of users.

9. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein in the preparing of the user-specific authorization information, the user information used in the encrypting of the content key is at least one of identification information unique to distributors of the digital content file, and identification information unique to authors of the digital content file.

10. (PREVIOUSLY PRESENTED) The data management method set forth in claim 7, wherein a decryption key for decrypting the encrypted user-specific authorization information is common to an encryption key as the content key for encrypting the digital content file, the decryption key being a shared key based on exclusive information transmitted and received among users and content distributors, using symmetric cryptography.

11. (PREVIOUSLY PRESENTED) The data management method set forth in claim 8, wherein a decryption key for decrypting the encrypted user-specific authorization information is common to an encryption key as the content key for encrypting the digital content file, the decryption key being a shared key based on exclusive information transmitted and received among users and content distributors, using symmetric cryptography.

12. (PREVIOUSLY PRESENTED) The data management method set forth in claim 9, wherein a decryption key for decrypting the encrypted user-specific authorization information is common to an encryption key as the content key for encrypting the digital content file, the decryption key being a shared key based on exclusive information transmitted and received among users and content distributors, using symmetric cryptography.

13. (PREVIOUSLY PRESENTED) The data management method set forth in claim 7, wherein digital content file distributors encrypt the content key employing a secret key as the user information, and the users decrypt the encrypted content key employing a public key provided in advance from the digital content file distributors, using public key cryptography.

14. (PREVIOUSLY PRESENTED) The data management method set forth in claim 8, wherein digital content file distributors encrypt the content key employing a secret key as the user information, and the users decrypt the encrypted content key employing a public key provided in advance from the digital content file distributors, using public key cryptography.

15. (PREVIOUSLY PRESENTED) The data management method set forth in claim 9, wherein digital content file distributors encrypt the content key employing a secret key as the user information, and the users decrypt the encrypted content key employing a public key provided in advance from the digital content file distributors, using public key cryptography.

16. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein the preview sample comprises as the invisible information a use count of times a user has used the digital content file; characterized in that the invisible information is rewritten each time a user uses the digital content file.

17. (PREVIOUSLY PRESENTED) The data management method set forth in claim 1, wherein the preview sample comprises as the invisible information authorization information to enable use count control; characterized in that the invisible information is rewritten when a user uses the digital content file a predetermined number of times and more.

18. (PREVIOUSLY PRESENTED) The data management method set forth in claim 16, characterized in that the invisible information is rewritten on decrypting and reading the substantive file.

19. (PREVIOUSLY PRESENTED) The data management method set forth in claim 16, characterized in that the invisible information is rewritten when use of the digital content file is ended.

20. (PREVIOUSLY PRESENTED) The data management method set forth in claim 17, characterized in that the invisible information is rewritten on decrypting and reading the substantive file.

21. (PREVIOUSLY PRESENTED) The data management method set forth in claim 17, characterized in that the invisible information is rewritten when use of the digital content file is ended.

22. (PREVIOUSLY PRESENTED) The data management method set forth in claim 16, wherein the invisible information in the preview sample comprises an error recovery function by containing redundant information.

23. (PREVIOUSLY PRESENTED) The data management method set forth in claim 16, characterized in that limits on read-out and use in decrypting the substantive file are governed based on the invisible information in the preview sample.

24. (PREVIOUSLY PRESENTED) The data management method set forth in claim 16, characterized in that one of year, month, date, and time limits within which read-out and use is possible in decrypting the substantive file are governed based on the invisible information in the preview sample.

25. (CURRENTLY AMENDED) A computer ~~data signal embodied in a carrier wave~~readable recording medium embodying data usable by a computer system, comprising:

a protected provider data file synthesized with an extracted accessible sample as an index to the provider data file for representing the provider data file, the sample having watermarked data-authorization information of the provider and data-authorization information of a recipient protecting the data-authorization information of the provider, ~~thereby allowing to~~enable a recipient computer system to provide a preview function of the protected provider data file via the synthesized extracted accessible sample and to access the protected provider data file according to the synthesized extracted accessible sample having the watermarked data-authorization information of the provider and the recipient.

26. (PREVIOUSLY PRESENTED) An apparatus, comprising:
a programmed computer processor encrypting a content file with a content key, preparing user specific content authorization information by encrypting the content key based upon user information, embedding user specific content authorization information as a watermark in an

extracted accessible sample as an index to the content file for representing the content file and synthesizing the extracted accessible sample having the watermarked user-specific-content-authorization information with the encrypted content file.

27. (NEW) A recording medium storing instructions to control a computer according to a process comprising:

- encrypting a content file with a content key;
- preparing user specific content authorization information by encrypting the content key based upon user information;
- embedding the user specific content authorization information as a watermark in an extracted accessible sample as an index to the content file for representing the content file; and
- synthesizing the extracted accessible sample having the watermarked user-specific-content-authorization information with the encrypted content file.

28. (NEW) A recording medium useable by an apparatus to access digital data stored thereon, comprising:

- a protected provider data file; and
- an extracted accessible sample synthesized with the protected provider data file and usable by the apparatus, as an index to the provider data file for representing the provider data file, the sample having watermarked data-authorization information of the provider and data-authorization information of a recipient,

wherein the sample enables the apparatus to provide a sample function of the protected provider data file via the synthesized extracted accessible sample and enables the apparatus to access the protected provider data file according to the synthesized extracted accessible sample having the watermarked data-authorization information of the provider and the recipient.

29. (NEW) An apparatus, comprising:

- a content administrator to distribute a digital content file to a user according to a process comprising:

- extracting a portion of the digital content file to be distributed to prepare a preview sample as an index to the digital content file for representing the digital content file,
 - preparing a substantive file by encrypting the digital content file with a content key,

preparing user specific authorization information by encrypting the content key based upon information of the user,

preparing a user specific authorization information embedded preview sample by embedding the user specific authorization information, containing information for accessing the encrypted digital content file, as invisible information in the extracted preview sample,

synthesizing the substantive file and the user-specific-authorization-information-embedded preview sample to prepare a synthesized digital content file, and

distributing the synthesized digital content file; and

a client apparatus to enable use of the distributed synthesized digital content file according to a process comprising:

receiving the distributed synthesized digital content file,

displaying for user selection the user-specific-authorization-information-embedded preview sample,

enabling user access to the synthesized digital content file by separating the user-specific authorization information from the preview sample, in response to a user selection of the user-specific-authorization-information-embedded preview sample,

restoring from the user-specific authorization information a decryption key as the content key, according to the user specific authorization information, and

decrypting the substantive file using the decryption key to enable access to the substantive file.

30. (NEW) An apparatus, comprising:

a content administrator to encrypt a digital content file with a content key;

a center to manage the digital content file and the content key; and

a user client apparatus to perform a process comprising:

communicatively connecting to the center via a network, and

transmitting to the center identification information of a user to request the digital content file from the center,

wherein the center performs according to the user request a process comprising:

extracting a portion of the user requested digital content file to prepare a preview sample as an index to the digital content file for representing the digital content file,

preparing user specific authorization information by encrypting the content key

based upon identification information of the user,

preparing a user specific authorization information embedded preview sample by embedding the user specific authorization information, containing information for accessing the encrypted digital content file, as invisible information in the extracted preview sample,

synthesizing the substantive file and the user-specific-authorization-information-embedded preview sample to prepare a synthesized digital content file, and

transmitting the synthesized digital content file to the user client apparatus.